

REMARKS

Claims 1-25 remain in the present application. Claims 1 and 18 are independent. Claims 1 and 18 have been amended to make them more readable and clear.

Embodiment of the Present Invention

To aid the Examiner's understanding of the present invention, an embodiment of the present invention will be briefly described.

In an embodiment of the present invention as disclosed, *inter alia*, on page 2 of the specification, Fig. 1A and Fig. 2, a method defines S100 a characteristic composite fingerprint for a subscriber station 26 associated with the operation of a subscriber station 26 in its authorized coverage area 36. A composite fingerprint refers to a statistical compilation of detected signal characteristics of a receive signal received from the subscriber station 26. A characteristic composite fingerprint refers to a composite fingerprint associated with the subscriber station 26 transmitting within an authorized coverage area 36 or another known area. An authorized coverage area 36 is a coverage area where communications service is intentionally provided to a particular subscriber station 26. In contrast, a restricted coverage area 38 is coverage area where communication service to a particular subscriber station 26 is prohibited or limited. An operational area monitor 12 monitors S102 an operational composite fingerprint for the subscriber station 26. The operational composite fingerprint refers to a composite fingerprint that is determined while the subscriber station 26 is active, regardless of whether the subscriber station 26 is located in the authorized coverage area 36 or the restricted coverage area 38. The monitor 12 or another network element compares S104 the operational composite fingerprint to the characteristic composite

fingerprint to determine if the subscriber station 26 is operating within the authorized coverage area 36 or the restricted coverage area 38.

Claim Objections

With regard to the Examiner's objections to claims 1, 18, and 24, Applicants assert that the objections are now moot given the amendments to claims 1, 18, and 24.

Rejections Under 35 U.S.C. § 102

Claims 1, 2, 18, and 19 are rejected under 35 U.S.C. § 102(b) as being anticipated by Barrere et al. (US Patent 5,715,518). Applicants respectfully traverse.

With regard to claim 1, Applicants assert that Barrere et al. fail to disclose comparing the operational composite fingerprint to a characteristic composite fingerprint of the subscriber station to determine if the subscriber station is operating within the authorized area. Barrere et al., instead, disclose a system for the identification of an individual transmitter operating in an environment containing a plurality of similar transmitters as either an authentic transmitter or an unauthorized transmitter. The system establishes a reference fingerprint by collecting and storing a plurality of response waveforms designated as reference waveforms for the authentic transmitter. The system can utilize the stored reference data associated with the authentic transmitter to authenticate an individual transmitter which transmits identification data identifying it as the authentic transmitter (Col. 2, line 42 - Col. 3, line 10). Generally, Barrere et al. discloses how to identify one transmitter out of a many. However, Barrere et al. is silent as to comparing the operational composite fingerprint to a characteristic composite fingerprint of the subscriber station to determine if the subscriber station is operating within the authorized area as recited in claim 1. Based on the

foregoing, Applicants assert that each and every element of the claimed invention is not disclosed by Barrere et al.

With regard to independent claim 18, claim 18 includes similar limitations to claim 1 and is allowable for at least the reasons stated above for independent claim 1.

With regard to claims 2 and 19, Applicants assert that they are allowable at least because they depend from one of claims 1 and 18. Accordingly, Applicants respectfully request that the Examiner withdraw the art grounds of rejection.

Rejections Under 35 U.S.C. § 103

Claims 1 and 2 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hilsenrath et al. (U.S. Patent No. 6,026,304). Applicants respectfully traverse.

With regard to independent claim 1, Applicants assert that Hilsenrath et al. fails to disclose comparing an operational composite fingerprint of a subscriber station to a characteristic composite fingerprint of the subscriber station. The Examiner admits this on page 4 of the Office Action by asserting that Hilsenrath et al. does not specifically disclose that the characteristic composite fingerprint is for the subscriber station. The Examiner points out that Hilsenrath et al. discloses a characteristic composite fingerprint compiled using a calibration mobile. The Examiner then asserts that it would have been obvious to use signals from the subscriber station to preserve system resources by not having to involve a second device. Applicants respectfully disagree.

Applicants point out that references must be considered as a whole and must suggest the desirability and thus the obviousness of making a combination. This being said, Hilsenrath et al. generally discloses a system for determining a location of a mobile device. A base station determines a signal signature of a mobile transmitter (Col. 4, lines 39-48). The signature is

compared to a database of calibrated signal signatures and corresponding locations, and a location whose calibrated signature best matches the measured signature is selected as the most likely mobile location. The database of calibrated signal signatures and corresponding locations is generated by a calibration procedure in which GPS location data of a calibration mobile is associated with the signal signature of the mobile. (Abstract and Col. 4, lines 35-55).

The Examiner suggests that it would have been obvious to use a subscriber station in lieu of the calibration mobile of Hilsenrath et al. to preserve system resources by not having to involve a second device (calibration mobile). However, to do as the Examiner suggests would require each subscriber mobile transmitter in a system to go through the calibration process disclosed by Hilsenrath et al. In the calibration process of Hilsenrath et al., a GPS receiver, computer, and phone are placed in a vehicle which moves to various locations throughout a base station service area. At each location, a base station determines the signal signature for that location and associates the signature with the GPS location transmitted from the mobile transmitter (Col. 9, lines 17-23).

Applicants assert that no one skilled in the art at the time of the Applicants' invention would recognize the calibrating of many subscriber mobile transmitters in a cellular system using the procedure described above as a preservation of system resources. This being said, there is no motivation for one skilled in the art to use a subscriber mobile transmitter in lieu of the calibration mobile in the system of Hilsenrath et al.

Based on the foregoing, Applicants assert that Hilsenrath et al. does not disclose or suggest comparing an operational composite fingerprint to a characteristic composite fingerprint of the subscriber station as recited in claim 1. Claim 1 is not rendered obvious to one skilled in the art by Hilsenrath et al.

Claim 2 is allowable at least because it depends from claim 1 . Accordingly, Applicants respectfully request that the Examiner withdraw the art grounds of rejection.

Claims 18-21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hilsenrath et al. Applicants respectfully traverse.

With regard to independent claim 18, claim 18 includes similar limitations to claim 1 and is allowable for at least the reasons stated above for independent claim 1.

Applicants assert that Claims 19-21 are allowable at least because they depend from claim 18. Accordingly, Applicants respectfully request that the Examiner withdraw the art grounds of rejection.

Claims 1, 2, 18 and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Rao et al. (US Patent 6,269,246)

With regard to claim 1, Applicants assert that Rao et al. fail to disclose monitoring an operational composite fingerprint of the subscriber station and comparing the operational composite fingerprint to a characteristic composite fingerprint of the subscriber station as recited in claim 1. Instead, Rao et al. disclose determining a location of a remote mobile unit by comparing a snapshot of a predefined portion of a radio-frequency (RF) spectrum taken by the mobile unit to a reference database containing multiple snapshots taken at various locations (Col. 1, lines 43-54). The mobile unit is equipped with circuitry and software that is capable of capturing information from predetermined portions of the RF spectrum (Col. 2, lines 53-55). The system of Rao et al. is based on the principle that any location has a unique RF spectral fingerprint (Col. 2, lines 40-43).

Applicants assert that while Rao et al. discloses a fingerprint, the fingerprint is the RF spectral fingerprint of a location. Rao et al. is silent as to using a fingerprint of a subscriber station. Therefore, Rao et al. can not disclose or suggest monitoring an operational composite fingerprint of a subscriber station and comparing the operational composite fingerprint to a characteristic composite fingerprint of the subscriber station as recited in claim 1.

With regard to independent claim 18, claim 18 includes similar limitations to claim 1 and is allowable for at least the reasons stated above for independent claim 1.

With regard to claims 2 and 19, Applicants assert that they are allowable at least because they depend from one of claims 1 and 18. Accordingly, Applicants respectfully request that the Examiner withdraw the art grounds of rejection.

Allowable Subject Matter

Applicants thank the Examiner for indicating that claims 3-17 and 22-25 are allowed. Applicants have not put claims 3-17 and 22-25 into independent form because they depend from one of claims 1 and 18 which Applicants assert are allowable.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the pending Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested.

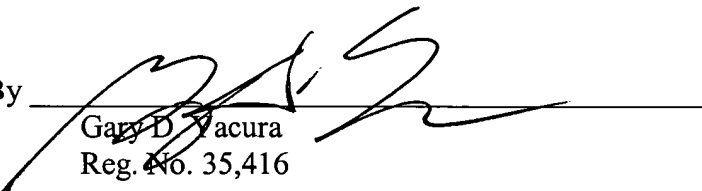
In the event that any matters remain at issue in the application, the Examiner is invited to contact the undersigned at (703) 668-8000 in the Northern Virginia area, for the purpose of a telephonic interview.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKY & PIERCE, P.L.C.

By



Gary D. Vacura
Reg. No. 35,416

P.O. Box 8910
Reston, VA 20195
(703) 668-8000

GDY/RFS:ewd